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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,963	03/05/2002	Dennis E. Chapman	112056-0047	6338

24267 7590 10/21/2004
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EXAMINER

NGUYEN, CINDY

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/090,963	Applicant(s) CHAPMAN, DENNIS E.	
	Examiner Cindy Nguyen	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/23/02, 08/01/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is in response to application filed on 03/05/04 in which claims 1-21 are presented for examination.

1. *Information Disclosure Statement*

The information disclosure statement filed on 07/23/02 and 08/01/03 are in compliance with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. Because it has been placed in the application file, and the information referred to therein has been considered as to the merits.

2. *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Thekkath et al. (U.S 6173293).

Regarding claim 1, Thekkath discloses: a method for generating a backup of a database, the method comprising the steps of : preparing the database for backup by rendering the database

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substantially coherent so that the database can be restored without loss of data¹ (col. 13, lines 8-24, Thekkath);

Creating a snapshot of a file system (col. 13, lines 26, Thekkath) comprising files including the database (file system, col. 13, lines 17, Thekkath) and associated log files (col. 13, lines 19-23, Thekkath) while the file system is active and available for access by users (col. 13, lines 61-63, Thekkath).

Regarding claim 2, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Thekkath discloses: the steps of generating snapinfo files in the file system including database log files and data associate with the backup, the data associated with the backup used for database restore procedures (col. 13, lines 44-50, Thekkath).

Regarding claim 17, Thekkath discloses: a method for generating a backup of a set of database files associated with the database program and a set of associated log files (col. 13, lines 52-64, Thekkath), the method comprising the steps of: performing a snapshot operation on the set of database files (col. 13, lines 43-50, Thekkath); and

Copying the set of log files to a directory associated with the backup² (col. 13, lines 43-50, Thekkath).

4. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

¹ The disk driver includes the capability to make full dumps to the file system (database) as snapshots, the snapshot will include all the logs, so that snapshot can be restored by copying it backup to a new virtual disk and running recovery on each log and reduces the crash-consistency.

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 4, 6, 8-11, 14, 18-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Thekkath et al. (U.S 6173293) in view of Ohran (U.S 5835953).

Regarding claim 3, all the limitations of this claim have been noted in the rejection of claim 2 above. However, Thekkath didn't disclose: the steps of verifying the database for coherency and updating the snapinfo files with results of the verification of the database. On the other hand, Ohran discloses: verifying the database for coherency (col. 17, lines 64 to col. 18, lines 4, Ohran), and updating the snapinfo files with results of the verification of the database (col. 17, lines 49-55, Ohran). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the steps of verifying the database for coherency and updating the snapinfo files with results of the verification of the database in the system of Thekkath as taught by Ohran. The motivation being to enable the backup system stores these changes or apply the changes to the backup storage device in order to bring the backup storage device current to a particular point in time.

Regarding claims 4 and 20, Thekkath/Ohran discloses: a method and a computer readable medium, including instructions executing on a computer for generating a point in time restoration of a set of database files and a set of associated log files to an active file system, the method comprising the steps of : selecting, by a user (client) a backup to restore therefrom, the backup comprising a snapshot of the file system including the set of database files and copies of the associated log files (col. 13, lines, Thekkath);

² The file system provides directories and files (col. 13, lines 53), when the new snapshot (the snapshot includes all

Verifying the selected backup for coherency (col. 17, lines 22-30, Ohran);

Copying, in response to the backup being coherent, the snapshot of the set of database files to the active file system (col. 17, lines 57-62, Ohran); and

Copying, in response to the backup being coherent, the copies of the associated log files to the active file system (col. 13, lines 17-24, Ohran).

Regarding claim 6, all the limitations of this claim have been noted in the rejection of claim 4 above. In addition, Thekkath /Ohran discloses: wherein the backup is selected from a set of backups associated with the active file system (col. 17, lines 66 to col. 18, lines 4, Ohran).

Regarding claim 8, all the limitations of this claim have been noted in the rejection of claim 4 above. In addition, Thekkath /Ohran discloses: wherein the database files and log files are associated with electronic mail message (105, fig. 1 of the application invention).

Regarding claim 9, all the limitations of this claim have been noted in the rejection of claim 4 above. In addition, Thekkath /Ohran discloses: wherein the set of associated log files further comprises data to be incorporated into the set of database files (col. 13, lines 36-41, Thekkath).

Regarding claims 10 and 21, Thekkath/Ohran discloses: a method and a computer-readable medium, including instructions executing on a computer for generating a point in time restoration of a set of database files and a set of associated log files to an active file system, the method comprising the steps of : selecting, a backup to restore therefrom, the backup comprising a snapshot of a file system including the set of database files (col. 13, lines 8-24, Thekkath), copies of the associated log files and copies of log files associated with a set of snapshots created later in time than the selected snapshot;

the logs) copy to the file system, it copy the log files to a directory.

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Verifying the selected backup (col. 20, lines 36-50, Ohran);

Copying, in response to the backup being successful verified, the snapshot of the set of database files to the active file system (col. 20, lines 65-67, Ohran);

Copying, in response to the backup being successfully verified, the copies of the associated log files to the active file system (col. 21, lines 25-29, Ohran); and

Copying the copies of the log files associated with the set of snapshots created later in time than the selected snapshot to the active file system (col. 21, lines 52-66, Ohran).

Regarding claim 11, all the limitations of these claims have been noted in the rejection of claim 10 and 4 above. It is therefore rejected as set forth above.

Regarding claim 14, Thekkath/Ohran discloses: method for generating a point in time restoration from a set of backups, each of the set of backup comprising a snapshot and copies of a set of log files associated with the snapshot, the method comprising the steps of selecting one of the set of backups to generate the point in time restoration therefrom (col. 21, lines 25-30, Ohran;

Copying the database files from the snapshot to an active file system (col. 21, lines 51-55, Ohran; and

Copy the copies of the set of log files to the active file system (col. 21, lines 51-55, Ohran).

Regarding claim 18, all the limitations of this claim have been noted in the rejection of claim 17 above. In addition, Thekkath/Ohran discloses: wherein the method further comprises the step of validating a snapshot generated by the snapshot operation (col. 13, lines 34-42, Thekkath).

Regarding claim 19, all the limitations of this claim have been noted in the rejection of claim 18 above. In addition, Thekkath /Ohran discloses: wherein the method further comprises the step of

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marking, in response to a successful validation of the snapshot, the snapshot as a backup snapshot (col. 13, lines 37-42, Thekkath).

6. Claims 5, 7, 12, 13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thekkath et al. (U.S 6173293) in view of Ohran (U.S 5835953) and further in view of Lewis et al. (U.S 2002/0083037) (Lewis).

Regarding claims 5, 12 and 16, all the limitations of these claims have been noted in the rejection of claims 4, 10 and 14 above, respectively. However, Thekkath/Ohran didn't disclose: wherein the step of copying the snapshot to the active file system further comprises the step of copying contents of a root inode associated with the snapshot to a root inode associated with the active file system. On the other hand, Lewis discloses: wherein the step of copying the snapshot to the active file system further comprises the step of copying contents of a root inode associated with the snapshot to a root inode associated with the active file system (page 3, 0050, Lewis). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the step of copying contents of a root inode associated with the snapshot to a root inode associated with the active file system in the combination system of Thekkath/Ohran as taught by Lewis. The motivation being to enable the system had a collection of snapshots of the volume, each snapshot includes all the information of a root block and is equivalent to an older root block from a previous active file system, when the snapshot performs, it includes a collection of pointers that directly or indirectly to the same inode file as the root block of the active file system.

Regarding claims 7, 13 and 15, all the limitations of these claims have been noted in the rejection of claims 4, 10 and 14 above, respectively. In addition, Thekkath/Ohran/Lewis

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discloses wherein the method further comprises the step of renaming the copies of the associated log files to the set naming convention (page 3, 0051, Lewis).

7. Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CA

Cindy Nguyen
October 12, 2004


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